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SPECIFICATION FOR DOFFER AND FLAT STRIPPING COMB BLADES

(First Revision)

UDC 677·051·178·3

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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

June 1982

AMENDMENT NO. 1 APRIL 2002
TO
IS 837 : 1982 SPECIFICATION FOR DOFFER AND FLAT STRIPPING COMB BLADES

(First Revision)

(*Page* 3, *clause* 2) — Insert following new clause 2.3 after 2.2:

'**2.3 Shape** — The shape of comb blade may be straight or curved.'

(TX 15)

Reprography Unit, BIS, New Delhi, India

Indian Standard

SPECIFICATION FOR DOFFER AND FLAT STRIPPING COMB BLADES

(First Revision)

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(*Continued on page* 2)

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SPECIFICATION FOR
DOFFER AND FLAT STRIPPING COMB BLADES

(First Revision)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 2 April 1982, after the draft finalized by the Spinning Machinery (Cotton System) Sectional Committee had been approved by the Textile Division Council.

0.2 This standard was originally published in 1962. The dimensions, number and profile of teeth of comb blade have not been included in this revision as these vary from manufacturer to manufacturer.

0.3 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes the requirements for doffer comb and flat stripping comb blades of revolving flat card.

2. MANUFACTURE

2.1 Material — The comb blade shall be made from steel conforming to designation T65 of Schedule VI of IS : 1570-1961† with sulphur and phosphorus not exceeding 0·05 percent. The chemical composition of steel is given in Table 1 for ready reference.

2.2 Workmanship and Finish — The comb blade shall have a smooth finish all over and shall be free from burrs and other manufacturing defects. The surface finish shall ensure that the fibres do not stick and shall have roughness grade of N5 (*see* IS : 3073-1967‡).

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*Rules for rounding off numerical values (*revised*).

†Schedules for wrought steels for general engineering purposes.

‡Assessment of surface roughness.

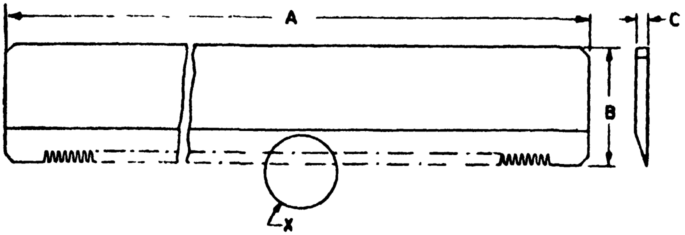
TABLE 1 CHEMICAL COMPOSITION OF STEEL

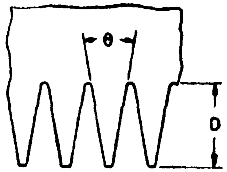
(*Clause* 2.1)

Sl No.	Constituents	Percent	
		Min	*Max*
(1)	(2)	(3)	(4)
i)	Carbon	0·60	0·70
ii)	Silicon	0·10	0·35
iii)	Manganese	0·50	0·80
iv)	Sulphur	—	0·05
v)	Phosphorus	—	0·05

3. REQUIREMENTS

3.1 Dimensions — The dimensions of the comb blade shall be as agreed to between the buyer and the seller subject to the tolerances given below:





ENLARGED VIEW AT X

	Tolerance
Angle of teeth, θ	± 1°
Length, *A*	± 1 mm
Width, *B*	± 0·5 mm
Thickness, *C*	± 0·06 mm
Depth of teeth, *D*	± 0·1 mm

3.2 Number and Profile of Teeth — The number and profile of teeth of the comb blade shall be as agreed to between the buyer and the seller.

3.3 Rectilinearity of Tips of Teeth — The tips of all the teeth in the comb blade shall be in the same plane.

3.3.1 By means of a suitable device, keep the comb blade vertical on a rigid plane surface with the tip of its teeth facing downwards. With a suitable measuring gauge, find the maximum clearance in millimetres, correct to 0·01 mm between the tip of the teeth and the plane surface. If the value for maximum clearance, so obtained, is less than 0·05 mm, the comb blade shall be held to be in conformity with the requirements of **3.3**.

3.4 Straightness of Blade — The comb blade shall be straight.

3.4.1 Place the comb blade so that it rests freely on a rigid plane surface. With a suitable measuring gauge, find the maximum clearance in millimetres, correct to 0·01 mm between the blade and the plane surface. If the value for maximum clearance, so obtained, is less than 0·05 mm the comb blade shall be held to be in conformity with the requirements of **3.4**.

4. PRESERVATIVE TREATMENT

4.1 Before packing each comb blade shall be coated with grease or any suitable rust proofing material.

5. PACKING

5.1 The teeth portion of each comb throughout its length blade shall be positioned inside a slot made for this purpose in a well-seasoned dry strip of timber. The strip of timber shall then be securely tied to the comb blade. The blades thus prepared shall then be packed in a wooden case according to the provisions of the agreement between the buyer and the seller.

6. MARKING

6.1 Each comb blade shall be clearly marked with the following:

a) Name of the article; and

b) Manufacturer's name, initials or trade-mark, if any.

6.1.1 The comb blades may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

7. SAMPLING

7.1 Lot — In any consignment, all the doffer and flat stripping comb blades delivered to a buyer against a despatch note shall constitute a lot.

7.2 Unless otherwise agreed to between the buyer and the seller, the number of comb blades to be selected at random for inspection shall be according to col 1 and 2 of Table 2. To ensure the randomness of selection, methods given in IS : 4905-1968* shall be followed.

TABLE 2 SAMPLE SIZE AND PERMISSIBLE NUMBER OF DEFECTIVES

LOT SIZE (1)	SAMPLE SIZE (2)
Up to 15	3
16 „ 25	5
26 „ 50	8
51 and above	13

7.3 All the comb blades selected according to **7.2** shall be examined for dimensions, rectilinearity of tips of teeth and straightness of blade. The lot shall be considered conforming to the requirements of this standard if all the comb blades selected meet the relevant requirements.

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*Methods for random sampling.

INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

QUANTITY	UNIT	SYMBOL
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

QUANTITY	UNIT	SYMBOL
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

QUANTITY	UNIT	SYMBOL	DEFINITION
Force	newton	N	$1\ \text{N} = 1\ \text{kg.m/s}^2$
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	$1\ \text{T} = 1\ \text{Wb/m}^2$
Frequency	hertz	Hz	$1\ \text{Hz} = 1\ \text{c/s}\ (\text{s}^{-1})$
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	$1\ \text{Pa} = 1\ \text{N/m}^2$

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